ABSTRACT

The invention relates to a bidirectional transmitting and receiving device having a transmitting component having an emission area of a first size, that emits light at a first wavelength, and a receiving component having a receiving area of a second size, that receives light at a second wavelength. The device further includes coupling optics for coupling a light between the transmitting component and the receiving component on the one hand and an optical waveguide that is to be coupled thereto on the other hand. According to the invention, the coupling optics have a diffraction structure that focuses light at the first wavelength and at the second wavelength differently, and the transmitting component and the receiving component are arranged alongside one another or one above the other, with transmitting component being located at the focus of the diffraction structure for the emitted wavelength, and light which is emitted from the transmitting component at the first wavelength being imaged on the end surface of the optical waveguide.